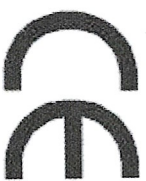


Central gearmotors for rolling shutters

Instructions and warnings for fitters
Warning: follow these personal safety instructions very carefully.
Save this manual for future reference.

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001



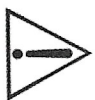
EC - Declaration of conformity

The central gearmotors for rolling shutters series BOLT comply with the following technical standards: UNI EN 292 Part 1, UNI EN 292 Part 2, UNI EN 294, UNI EN 418, CEI EN 60335-1, EN 55014-2 and the European directives 98/37/EEC, 73/23/EEC, and 89/336/EEC.

Declaration of incorporation

The central gearmotors for rolling shutters series BOLT, when installed and maintained according to the manufacturer's instructions, in conjunction with roller rolling shutter, which must also be installed and maintained according to the instructions of their manufacturers, comply with the provisions of the regulations of the EU Directive 89/392 EEC and successive amendments. I the undersigned declare that the foregoing equipment and all the accessories stated in the handbook comply with the foregoing directives.

IMPORTANT SAFETY INSTRUCTIONS ATTENTION - FOR REASONS OF PERSONAL SAFETY IT IS IMPORTANT TO OBSERVE THESE INSTRUCTIONS RETAIN THESE INSTRUCTIONS



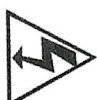
Do not let children play with fixed control devices. Keep the remote controls out of reach of children. Perform frequent checks on the system for any signs of unbalance and wear or damage to wires or springs. Do not use the equipment if it requires repair or regulation.



These warning symbols serve to remind you to pay the maximum attention when the equipment is in use. They indicate the procedures to be followed to avoid risks to persons or things. This gearmotor is designed to function safely if installed and used in compliance with the following instructions. The equipment must only be employed for residential uses and must be installed indoors.



You are warned that incorrect installation can cause serious injuries. Follow all the installation instructions.



Do not use command buttons that can simultaneously operate the equipment in both directions. Do not command more than one gearmotor with each button. Conduct frequent examinations on the installation to check for signs of unbalance and wear/damage to the wiring. Do not use the equipment if it requires repairs or adjustments. The product cannot be installed for heights of less than 2.5 m.

The deployment of a device that guarantees omnipolar disconnection from the mains with an opening of at least 3 mm between the contacts is obligatory.

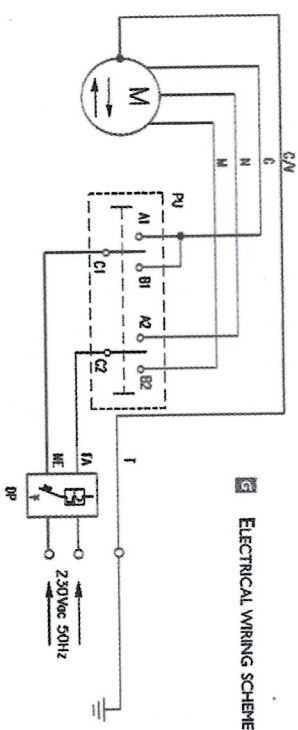
Before installing the gearmotor for operating the rolling shutter, remove all superfluous wires and disable any equipment not necessary for motorised movement. The control button must be placed in sight of the equipment, kept separate from the moving parts and at a height of at least 1.5 m. If the power cables are damaged they must be replaced by the constructor or his technical after-sales service or, in any case, by a similarly qualified person in order to avoid all risks. The gearmotor is designed for intermittent operation and is provided with an internal thermal protection that interrupts power supply in the event of overheating caused by continued use. The gearmotor automatically resets itself after a few minutes. However, regular operation will only be possible when the gearmotor cools down.

technical characteristics

MODEL	TORQUE	L. SWITCH	RPM	CONDENSER	MAINS VOLTAGE	ASSIGNED POWER	POWER	THERMAL	WEIGHT
	Nm	m	r/min	µF	V	A	W	min.	kg
BOLT-C70/C1070	70	6	10	10µF	230-50 Hz	1.62	372	4	8
BOLT-C80/C800	80	6	10	10µF	230-50 Hz	1.66	382	4	8
BOLT-C100/C1000	100	6	10	14µF	230-50 Hz	1.79	412	4	8.5
BOLT-G120/C120	120	6	10	16µF	230-50 Hz	1.85	405	4	8.5
BOLT-G140/C140	140	6	10	18µF	230-50 Hz	2.15	495	4	9.5
BOLT-G160/C160	160	6	10	20µF	230-50 Hz	2.49	572	4	10
BOLT-C180/C180	180	6	10	20µF	230-50 Hz	2.85	656	4	10
BOLT-C200/C200	200	6	10	40µF	230-50 Hz	4.91	1129	4	12.5
BOLT-F180/F180	80	6	10	10µF	230-50 Hz	1.65	370	4	8
BOLT-F100/F100	100	6	10	10µF	230-50 Hz	1.61	380	4	8.5
BOLT-F120/F120	120	6	10	12µF	230-50 Hz	1.72	396	4	8.5
BOLT-F140/F140	140	6	10	14µF	230-50 Hz	1.95	450	4	8.5
BOLT-F160/F160	160	6	10	16µF	230-50 Hz	2.21	510	4	9
BOLT-F180/F180	180	6	10	18µF	230-50 Hz	2.56	590	4	9.5
BOLT-F200/F200	200	6	10	20µF	230-50 Hz	2.86	620	4	9.5
BOLT-F240/F240	240	6	10	24µF	230-50 Hz	3.15	725	4	10
BOLT-F280/F280	280	6	10	28µF	230-50 Hz	3.48	800	4	10
BOLT-F300/F300	300	6	10	40µF	230-50 Hz	5.21	1198	4	12.5

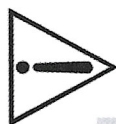
TECHNICAL DATA

- Die-cast aluminium body and rim
- Steel gears, roller bearings
- Rim mounted on bearing
- Drive shaft mounted on double ball bearings
- Asynchronous 4 pole motor 1.400 rpm
- Class B isolation
- Thermal protection on motor: 160°C.
- Easy limit-switch adjustment
- 9) 6 mt. maximum shutter height
- 10) Alimentation electric cable: 4x1 mm² for BOLT C and BOLT F, 4x1.5 mm² for BOLT CDM and BOLT FDM.
- 11) Operating temperature: -20°C. +85°C.
- 12) Fittings for electrobrake mounting P-PBM-P115

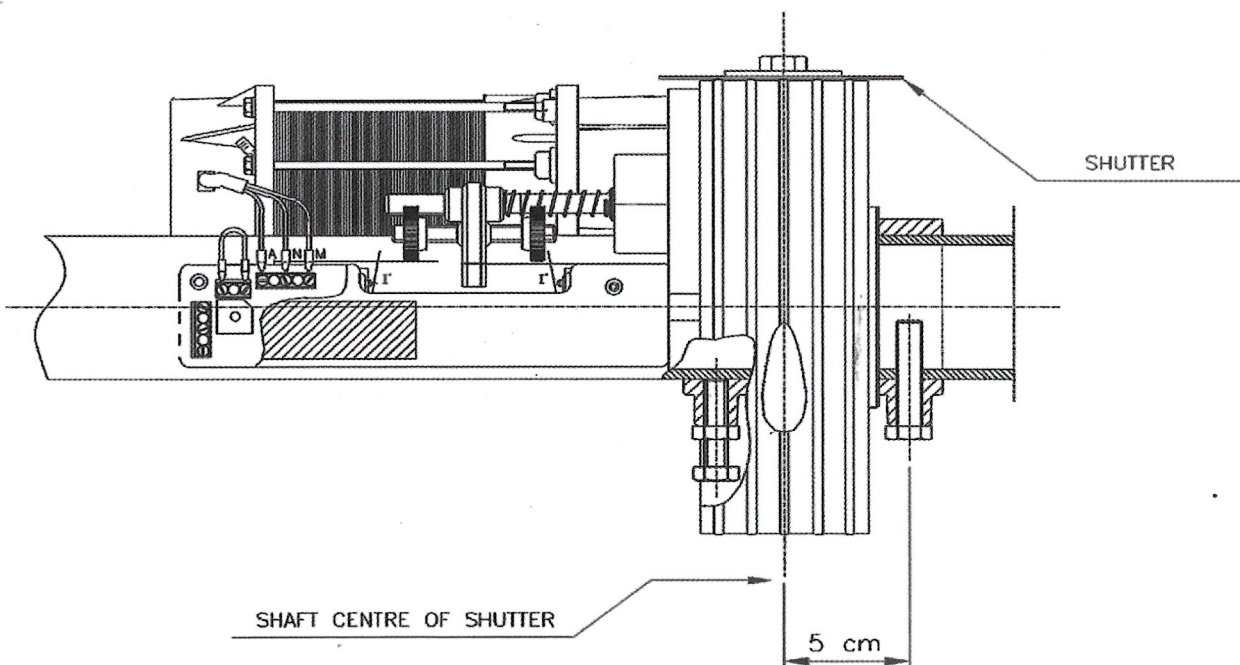


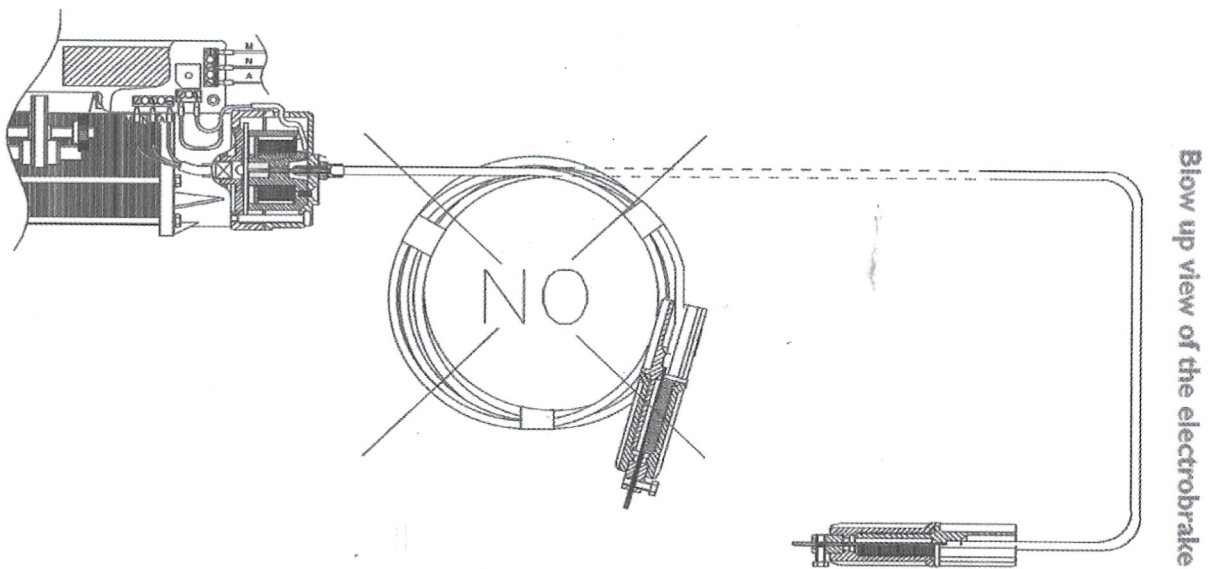
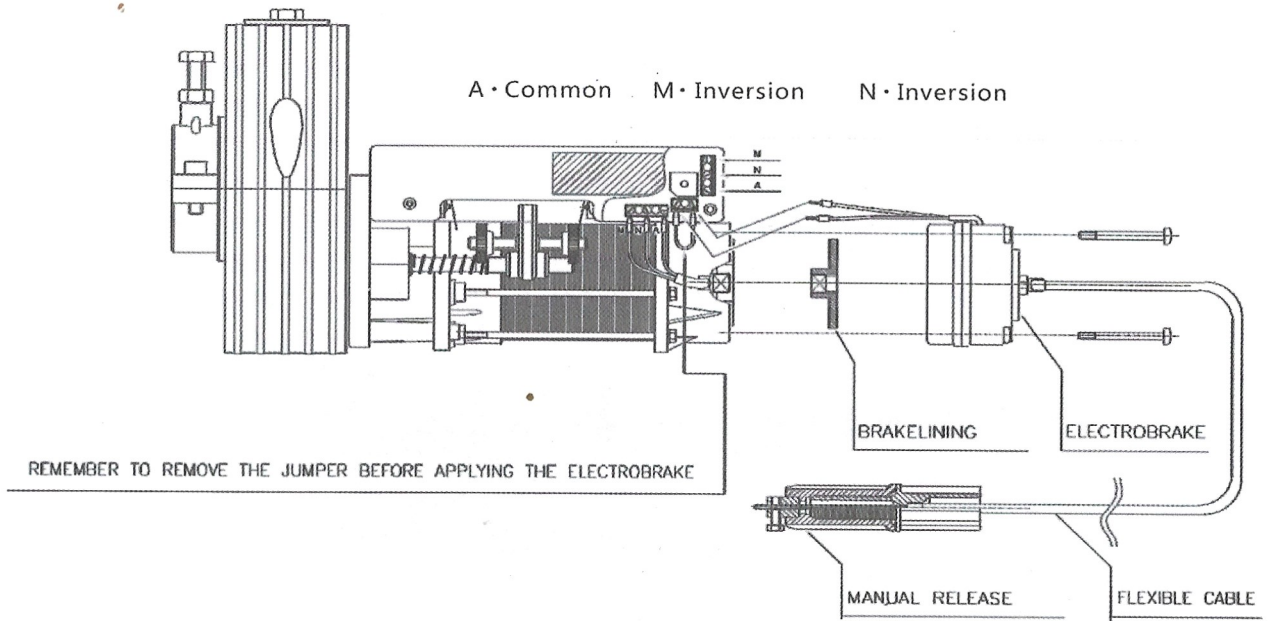
- G** GND
- N** BLACK NEUTRAL
- M** BROWN PHASE
- PU** SWITCH
- G/M** EARTH
- DP** OMNIPOLAR DEVICE 3 mm OPENING DISTANCE BETWEEN CONTACTS

INSTALLATION INTRUCTIONS

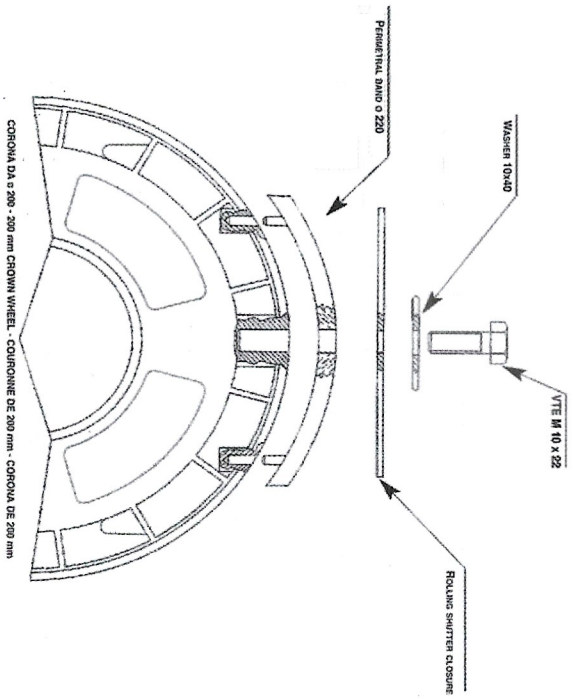


- 1) Drill a 10 mm diameter hole 5 cm from the same location as the M10 threaded hole on centre of the shutter's shaft (see fig. I);
- 2) Remove the M 10 c.e. screws from the gear of the gearmotor;
- 3) Remove the two semi-gears by unscrewing the two M 8 screws (using a 6 mm hexagonal wrench);
- 4) Carefully remove, avoiding any folding, the black plastic roller carrier band;
- 5) Separate the two elements of the gearmotor (upper and lower body) acting on the four M 8 screws (using a 6 mm hexagonal wrench);
- 6) Should the shutter shaft be less than 60 mm long, use the dedicated reducing sockets positioning them using the previously drilled diameter mm hole as a reference (point I);
- 7) Join the upper and lower bodies using the four M8 screws removed before;
- 8) Tighten the M 10 c.e. screw without hexagon nut using a 17 mm wrench and ensure it enters the shutter shaft via the 10 mm hole (previously drilled);
- 9) Install the roller band in its appropriate housing;
- 10) Apply the semi-gears, holding them with the two M 8 screws;
- 11) Tighten the M 10 c.e. screw with nut so as to block the gearmotor on the shaft and drill a 12 mm diameter hole at the centre of the shutter on the shaft and drill a 12 mm diameter hole at the
- 13) Tighten by hand the gear by 1-1/2 turns by bringing the grip towards microswitch I (it must turn easily);
- 14) Lock the shutter to the gearmotor using the M 10 c.e. screw with washer (using a 17 mm wrench);
- 15) Make the electrical connections described in page 7 passing the 4x1 mm cable supplied inside the shutter shaft avoiding any contact with the rotating parts;
- 16) After having installed the mechanical parts and electrical contacts, proceed to regulate the end of travel;
- 17) Turn the end of travel grip by hand until you hear the click of the microswitch's trigger (down regulation completed);
- 18) Turn the other grip towards microswitch II (up). Switch on current to the motor via the key selector or button to ensure that when rising the shutter stops at the correct point to regulate the position, adjust the grip, using solely and exclusively the electric commands taking all precautions to avoid manual lifting.
- 19) Should the shutter need to be installed contrary to the description in fig. I, the steps described above should be carried out to the contrary as microswitch II will stop the descent and microswitch I will stop the opening.



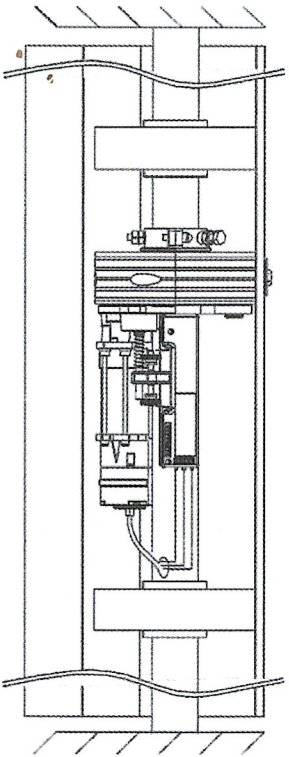


The Chinabolt built with a 200 mm crown wheel, which can be converted into a 220 mm crown wheel by the use of a perimetral band.



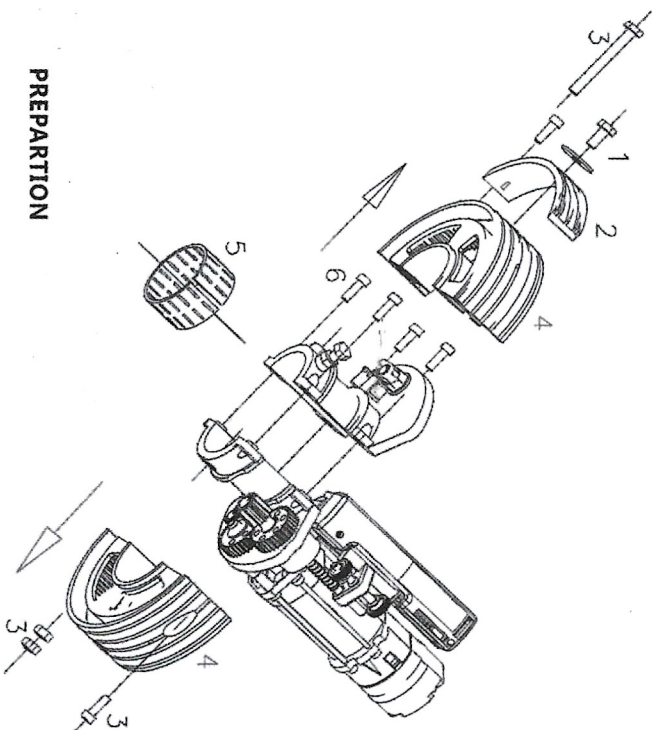
EUROSAFETY . EUROSAFETY PLUS . UNISAFETY . UNISAFETY PLUS

Euro safety and Unisafety are version of the gearmotors with safety device carried out to the stop the free fall of roller shutters and at the same time, in Plus version, to interrupt the motorreductor's feeding.

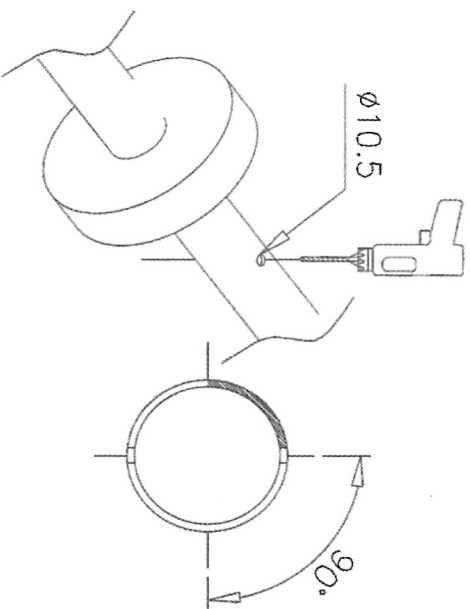


TOWARDS OF INSTALLATION OF THE GEARMOTOR

a)

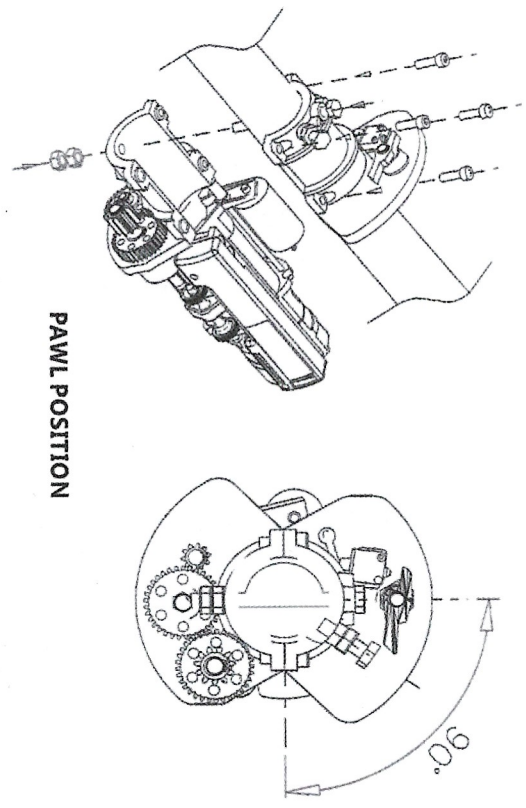


PREPARATION

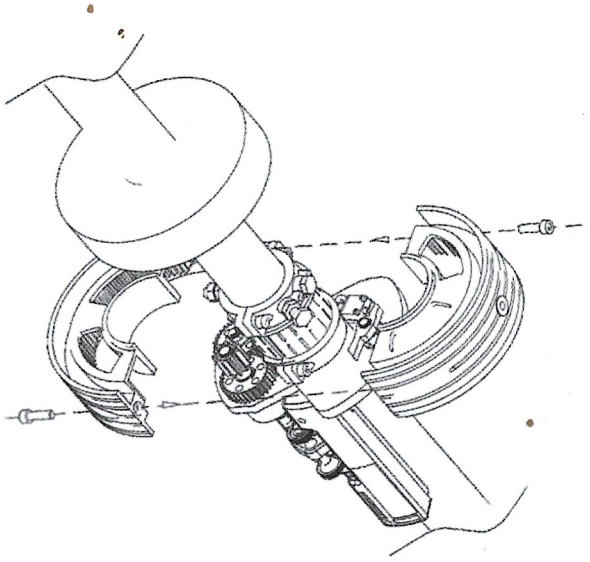


ON THE AXIS OF THE SHUTTER TO PRACTICE 1 HOLE

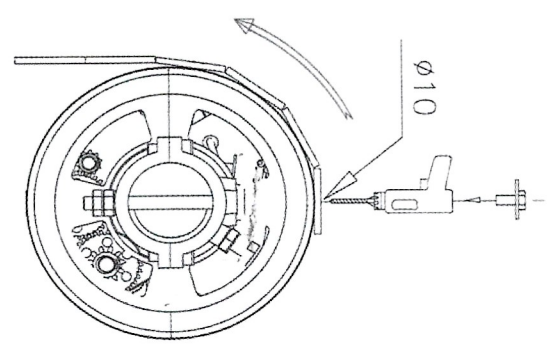
b)



PAWL POSITION

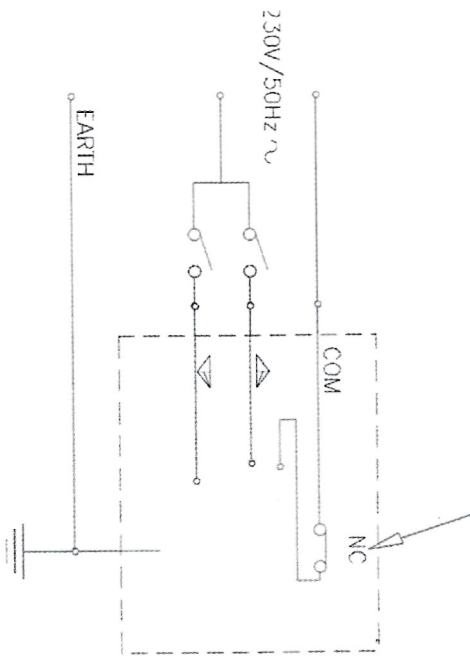


c)



DOWNWARD RUN OF THE ROLLER SHUTTER

MICROSWITCH (ONLY PLUS VERSIONS)



ELECTRICAL WIRING SCHEME